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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,606	02/05/2002	James Mantyla	669-78	5890

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EXAMINER

KOKABI, AZADEH

ART UNIT PAPER NUMBER

3743

DATE MAILED: 10/20/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/067,606

Applicant(s)

MANTYLA ET AL.

Examiner

Azy Kokabi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 17 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crawford ('154) in view of Stafford ('921).

Crawford ('154) teaches a "first tubing element" (C) with an "attachment bell" (generally the threaded flange C') at one end and a "first coupler portion" (C3, C4) at the other end. Crawford further discloses a "second tubing element" (F) having an "attachment bell" (unnumbered threaded portion at the left in fig. 2) at one end and a "second coupler portion" (F') at the other end. Crawford also discloses a connector (E), which couples the first and second coupler portions together. Figures 1 and 2 show that the "first tubing element" is "generally u-shaped."

Crawford fails to disclose a seal that fits between the first and second coupler portion.

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Stafford discloses a ball and socket pipe union, which employs a seal (#16) to prevent leakage (see lines 10-18).

In view of Stafford, it would have been obvious to provide the Crawford assembly with a seal between the first and second coupler portion to prevent leakage.

Stafford further teaches that an encircling shoulder (3) may be provided on the ball portion of the joint for engaging the end of the socket (see page 1, line 107- page 2, line 3). This feature creates an “angel stop” because it prevents the joint from articulating beyond the point of contact between the shoulder and the socket.

It would have been obvious to one of ordinary skill in the art to provide such a feature on the Crawford joint to limit the articulation of the joint.

The joint taught by Crawford meets the limitations recited in claims 3, 4, and 7.

Regarding claim 5, the ball portion of the Crawford joint has a center of curvature (see figure 2).

Regarding claim 6, although Crawford is silent as to the exact angle subtended by the outer portion of the ball element, it appears from figure 2 that the Crawford ball meets the claimed angle. On the other hand, it would have been obvious to increase or decrease the surface area of the Crawford ball portion to increase or decrease the range of angles over which the joint may be articulated.

Regarding claims 8, 15, and 16, Stafford teaches that the “connector” (12) has a rim (14) that forms a wedge-shaped gap between the connector and ball portion into which the corresponding wedge-shaped sealing gasket (16) is placed.

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It would have been obvious to provide these features in the Crawford joint to obtain the advantages associated therewith, such as ease of construction and leakproofing (see page 1, lines 14-18).

Regarding claim 9, the “outer seal surface” of the Stafford seal (16) is considered to be conical insofar as the term has been defined by applicant.

Regarding claims 10, 12-14, Stafford teaches that the sealing gasket (16) is a “packing ring.” It is well known in the art that “packing” refers to sealing rings made of compressible materials. As such, the Stafford gasket would be compressible so as to match the outer part spherical surface of the ball portion. Moreover, it would have been obvious to mold the gasket from a suitable plastic material, such as low-density polyethylene, as a matter of design choice depending on the desired compressibility and joint tightness.

Regarding claim 11, Stafford shows in figure 1 that the “thrust face” (the face abutting the connector rim) is “generally planar.”

Response to Arguments

4. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Applicant argues that there is no motivation to combine the Crawford and the Stafford devices because no gap exists in the Crawford device to hold a seal. Applicant argues

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that Crawford provides a leak-tight arrangement with a component-to-component interface (see page 13).

The Stafford and Crawford devices are analogous in that both devices are ball and socket pipe each having a connector to tighten the pipes. Stafford teaches that a gasket may be used to “provide a pipe-union ... that shall be cheap, durable, efficient, and consist of few parts and easily installed, and not liable by wear, to cause leakage.” (see lines 14-18). In view of Stafford, it would have been obvious to one of ordinary skill in the art to have provided a gap in the Crawford device to employ a seal in order to prevent leakage. The seal of Stafford prevents leakage (line 18) and provides a tight joint under “all positions of the pipes within the limits of the coupling” (lines 92-94). Therefore, Stafford clearly teaches the advantages of using a compressible seal in a ball and socket joint and provides motivation to employ such a seal in the Crawford device.

Furthermore, Applicant argues that Stafford does not say anything relating to the purpose of the encircling shoulder. However, Applicant acknowledges that the encircling shoulder (3) of the Stafford device limits the angle between the joints (see page 16 of response). The size, shape and position of the angle stop is set as a matter of design choice.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Azy Kokabi whose telephone number is (703) 306-4154. The examiner can normally be reached on Monday- Friday, 6:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennett can be reached at (703) 908-0101. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.

AK

Henry Bennett
Supervisory Patent Examiner
Group 3700

